

Appendix table 3-2

Scientists and engineers, by occupation and degree field: 2008

Occupation	Highest degree in S&E									
	All employed scientists and engineers	Any degree in S&E	All S&E	Computer/mathematical sciences	Biological/agricultural/environmental life sciences	Physical sciences	Social sciences	Engineering	S&E-related fields	Non-S&E fields
All occupations	19,244,000	14,145,000	10,216,000	1,651,000	1,569,000	665,000	3,878,000	2,453,000	4,727,000	4,302,000
Science and engineering occupations	4,874,000	4,275,000	3,881,000	928,000	478,000	361,000	539,000	1,575,000	276,000	717,000
Computer and mathematical scientists	1,970,000	1,577,000	1,429,000	872,000	51,000	53,000	138,000	316,000	124,000	416,000
Computer and information scientists	1,778,000	1,410,000	1,286,000	779,000	40,000	46,000	119,000	302,000	104,000	388,000
Computer and information scientists, research	45,000	38,000	35,000	23,000	2,000	2,000	2,000	5,000	2,000	8,000
Computer support specialists	193,000	123,000	110,000	58,000	8,000	5,000	20,000	19,000	17,000	67,000
Computer system analysts	434,000	313,000	282,000	199,000	9,000	9,000	25,000	41,000	33,000	119,000
Database administrators	100,000	80,000	72,000	43,000	7,000	4,000	10,000	9,000	5,000	23,000
Network and computer systems administrators	178,000	134,000	120,000	74,000	4,000	5,000	15,000	23,000	11,000	46,000
Network systems and data communications analysts	88,000	69,000	63,000	37,000	2,000	2,000	10,000	13,000	2,000	23,000
Other computer and information science occupations	145,000	102,000	89,000	47,000	4,000	6,000	20,000	13,000	7,000	50,000
Computer engineers—software	594,000	550,000	514,000	298,000	6,000	12,000	18,000	180,000	28,000	52,000
Mathematical scientists	107,000	94,000	77,000	37,000	9,000	5,000	17,000	9,000	10,000	21,000
Mathematicians	6,000	6,000	6,000	5,000	S	<500	S	S	S	S
Operations research analysts, including modeling	57,000	50,000	41,000	15,000	6,000	3,000	10,000	7,000	3,000	13,000
Statisticians	39,000	33,000	27,000	16,000	3,000	2,000	5,000	1,000	7,000	6,000
Other mathematical scientists	6,000	4,000	4,000	1,000	S	S	2,000	1,000	S	S
Postsecondary teachers—computer and math sciences	84,000	73,000	66,000	56,000	2,000	2,000	2,000	5,000	10,000	8,000
Postsecondary teachers—computer science	22,000	18,000	16,000	13,000	1,000	1,000	1,000	2,000	2,000	3,000
Postsecondary teachers—mathematics and statistics	62,000	55,000	50,000	43,000	1,000	2,000	1,000	3,000	8,000	4,000
Biological, agricultural, and other life scientists	498,000	455,000	412,000	2,000	348,000	28,000	23,000	11,000	52,000	34,000
Agricultural and food scientists	62,000	58,000	55,000	S	47,000	1,000	5,000	1,000	1,000	6,000
Biological and medical scientists	331,000	304,000	272,000	1,000	225,000	23,000	14,000	9,000	45,000	14,000
Biochemists and biophysicists	45,000	45,000	44,000	S	33,000	8,000	S	2,000	1,000	S
Biological scientists (e.g., botanists, ecologists, zoologists)	128,000	120,000	114,000	S	104,000	5,000	3,000	2,000	5,000	9,000
Medical scientists (excluding practitioners)	124,000	107,000	84,000	<500	64,000	7,000	9,000	4,000	36,000	4,000
Other biological, agricultural or life scientists	34,000	32,000	30,000	1,000	23,000	2,000	2,000	1,000	3,000	2,000
Forestry and conservation scientists	35,000	29,000	27,000	S	22,000	3,000	2,000	S	S	8,000
Postsecondary teachers—life and related sciences	70,000	64,000	58,000	S	54,000	2,000	2,000	1,000	6,000	6,000
Postsecondary teachers—agriculture	8,000	6,000	5,000	S	4,000	S	S	S	S	3,000
Postsecondary teachers—biological sciences	59,000	55,000	52,000	S	48,000	1,000	2,000	1,000	5,000	2,000
Postsecondary teachers—other natural sciences	3,000	3,000	2,000	S	2,000	<500	S	S	S	S
Physical and related scientists	322,000	308,000	296,000	3,000	40,000	226,000	8,000	20,000	7,000	19,000
Chemists, except biochemists	129,000	124,000	119,000	S	16,000	95,000	S	6,000	2,000	8,000
Earth scientists, geologists, and oceanographers	78,000	76,000	73,000	1,000	5,000	59,000	4,000	5,000	1,000	3,000
Atmospheric and space scientists	15,000	14,000	14,000	S	<500	11,000	<500	1,000	S	1,000
Geologists, including earth scientists	59,000	58,000	56,000	S	4,000	45,000	3,000	3,000	S	3,000
Oceanographers	4,000	3,000	3,000	S	<500	3,000	S	<500	S	S
Physicists and astronomers	27,000	27,000	26,000	1,000	S	22,000	S	3,000	1,000	S

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Occupation	All employed scientists and engineers	Any degree in S&E	Highest degree in S&E							
			All S&E	Computer/ mathematical sciences	Biological/ agricultural/ environmental life sciences	Physical sciences	Social sciences	Engineering	S&E-related fields	Non-S&E fields
Astronomers	3,000	3,000	3,000	S	S	3,000	S	S	S	S
Physicists	25,000	24,000	23,000	1,000	S	19,000	S	3,000	1,000	S
Other physical scientists	35,000	29,000	28,000	S	13,000	10,000	2,000	3,000	2,000	5,000
Postsecondary teachers—physical and related sciences	54,000	52,000	50,000	<500	5,000	40,000	1,000	3,000	<500	4,000
Postsecondary teachers—chemistry	24,000	23,000	23,000	S	2,000	18,000	S	2,000	S	S
Postsecondary teachers—earth, environmental, and marine sciences	15,000	14,000	13,000	S	2,000	8,000	1,000	1,000	<500	2,000
Postsecondary teachers—physics	15,000	15,000	15,000	S	<500	14,000	S	1,000	S	S
Social and related scientists	502,000	449,000	378,000	7,000	6,000	3,000	354,000	8,000	30,000	94,000
Economists	29,000	28,000	25,000	1,000	<500	S	24,000	S	S	4,000
Political scientists	17,000	16,000	14,000	S	S	S	14,000	S	S	3,000
Psychologists, including clinical	185,000	177,000	159,000	S	S	S	159,000	S	4,000	21,000
Sociologists and anthropologists	21,000	21,000	19,000	S	S	S	19,000	S	S	S
Anthropologists	11,000	11,000	11,000	S	S	S	11,000	S	S	S
Sociologists	10,000	10,000	9,000	S	S	S	9,000	S	S	S
Other social scientists	134,000	102,000	70,000	5,000	4,000	2,000	52,000	7,000	22,000	42,000
Postsecondary teachers—social and related sciences	116,000	105,000	89,000	1,000	1,000	<500	86,000	<500	3,000	24,000
Postsecondary teachers—economics	18,000	17,000	15,000	<500	S	S	14,000	S	S	3,000
Postsecondary teachers—political science	15,000	14,000	13,000	S	S	S	13,000	S	S	1,000
Postsecondary teachers—psychology	33,000	31,000	28,000	S	<500	S	27,000	S	<500	5,000
Postsecondary teachers—sociology	18,000	17,000	14,000	S	S	S	14,000	S	S	3,000
Postsecondary teachers—other social sciences	33,000	25,000	19,000	S	<500	S	18,000	<500	2,000	12,000
Engineers	1,582,000	1,487,000	1,366,000	45,000	34,000	50,000	17,000	1,221,000	62,000	154,000
Aerospace, aeronautical, or astronautical engineers	100,000	96,000	88,000	5,000	S	3,000	1,000	78,000	2,000	11,000
Agricultural engineers	7,000	6,000	6,000	S	S	S	S	4,000	S	S
Bioengineering and biomedical engineers	28,000	26,000	24,000	1,000	2,000	1,000	S	20,000	2,000	2,000
Chemical engineers	77,000	76,000	67,000	S	2,000	5,000	S	60,000	S	10,000
Civil, architectural, or sanitary engineers	258,000	252,000	238,000	1,000	2,000	2,000	2,000	232,000	4,000	15,000
Electrical or computer hardware engineers	399,000	373,000	347,000	20,000	2,000	10,000	2,000	313,000	17,000	34,000
Computer engineers—hardware	53,000	49,000	45,000	10,000	S	2,000	1,000	32,000	2,000	5,000
Electrical and electronics engineers	346,000	324,000	302,000	10,000	2,000	8,000	1,000	281,000	15,000	29,000
Environmental engineers	86,000	78,000	72,000	S	12,000	9,000	3,000	48,000	5,000	8,000
Industrial engineers	93,000	78,000	69,000	2,000	2,000	2,000	2,000	61,000	10,000	14,000
Marine engineers and naval architects	300,000	286,000	260,000	3,000	1,000	3,000	2,000	251,000	11,000	30,000
Materials and metallurgical engineers	12,000	11,000	10,000	S	S	S	S	10,000	S	2,000
Mechanical engineers	46,000	44,000	39,000	1,000	S	5,000	S	33,000	S	7,000
Mining and geological engineers	7,000	7,000	7,000	S	S	1,000	S	6,000	S	S
Nuclear engineers	17,000	17,000	15,000	S	S	1,000	S	14,000	S	2,000
Petroleum engineers	19,000	19,000	17,000	S	S	2,000	S	14,000	S	S

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Scientists and engineers, by occupation and degree field: 2008

Occupation	All employed scientists and engineers	Any degree in S&E	Highest degree in S&E							
			All S&E	Computer/ mathematical sciences	Biological/ agricultural/ environmental life sciences	Physical sciences	Social sciences	Engineering	S&E-related fields	Non-S&E fields
Sales engineers	49,000	39,000	37,000	6,000	4,000	1,000	3,000	23,000	5,000	8,000
Other engineers	48,000	43,000	37,000	3,000	2,000	5,000	<500	27,000	2,000	9,000
Postsecondary teachers—engineering	35,000	34,000	32,000	1,000	2,000	2,000	<500	27,000	S	2,000
S&E-related occupations	5,542,000	2,507,000	1,285,000	252,000	403,000	89,000	301,000	241,000	3,480,000	778,000
Health-related occupations	3,780,000	1,404,000	456,000	15,000	243,000	24,000	160,000	14,000	3,056,000	267,000
Diagnosing/treating practitioners (e.g., dentists, optometrists, physicians)	1,066,000	700,000	49,000	1,000	40,000	2,000	4,000	2,000	1,009,000	8,000
Registered nurses, pharmacists, dieticians, therapists, physician assistants	1,913,000	319,000	124,000	4,000	57,000	6,000	51,000	5,000	1,674,000	115,000
Health technologists and technicians (e.g., dental hygienist, health record tech)	357,000	172,000	147,000	4,000	91,000	11,000	39,000	3,000	164,000	45,000
Other health occupations	318,000	165,000	119,000	6,000	43,000	3,000	63,000	4,000	118,000	82,000
Postsecondary teachers—health and related sciences teachers	126,000	48,000	18,000	<500	12,000	1,000	4,000	1,000	91,000	18,000
S&E managers	501,000	367,000	291,000	69,000	30,000	20,000	38,000	134,000	87,000	123,000
Computer and information systems managers	178,000	130,000	109,000	59,000	5,000	3,000	21,000	21,000	6,000	63,000
Engineering managers	168,000	155,000	127,000	9,000	<500	6,000	1,000	110,000	8,000	33,000
Medical and health services managers	127,000	55,000	31,000	1,000	11,000	2,000	16,000	1,000	71,000	25,000
Natural sciences managers	28,000	27,000	25,000	S	13,000	8,000	1,000	2,000	2,000	1,000
S&E precollege teachers	599,000	350,000	194,000	50,000	57,000	22,000	56,000	8,000	148,000	258,000
Secondary school teachers—computer, math, or sciences	445,000	278,000	158,000	49,000	57,000	22,000	23,000	7,000	124,000	164,000
Secondary school teachers—social sciences	155,000	71,000	36,000	S	S	S	34,000	S	25,000	94,000
S&E technicians and technologists	446,000	318,000	296,000	93,000	70,000	23,000	43,000	66,000	34,000	117,000
Technologists and technicians in the biological/life sciences	62,000	54,000	51,000	S	41,000	3,000	4,000	2,000	4,000	7,000
Computer programmers (business, scientific, process control)	204,000	141,000	129,000	82,000	4,000	8,000	16,000	19,000	10,000	65,000
Electrical, electronic, industrial, mechanical technicians	71,000	48,000	44,000	3,000	8,000	3,000	7,000	23,000	12,000	15,000
Drafting occupations, including computer drafting	28,000	14,000	14,000	1,000	S	S	5,000	7,000	3,000	10,000
Surveying and mapping technicians	11,000	9,000	9,000	S	5,000	1,000	3,000	1,000	S	1,000
Other engineering technologists and technicians	31,000	19,000	17,000	2,000	4,000	1,000	1,000	9,000	3,000	11,000
Surveyors, cartographers, photogrammetrists	20,000	15,000	15,000	2,000	1,000	1,000	7,000	3,000	S	4,000
Technologists and technicians in the mathematical sciences	<500	<500	<500	S	S	S	S	S	S	S
Technologists and technicians in the physical sciences	21,000	19,000	17,000	2,000	7,000	6,000	1,000	<500	S	4,000
Architects	182,000	40,000	23,000	2,000	3,000	S	1,000	18,000	147,000	11,000
Actuaries	34,000	28,000	26,000	23,000	S	1,000	1,000	S	7,000	1,000
Non-S&E occupations	8,828,000	7,363,000	5,050,000	472,000	689,000	215,000	3,038,000	637,000	971,000	2,807,000
Non-S&E managers	1,261,000	1,047,000	692,000	71,000	85,000	44,000	298,000	193,000	138,000	431,000
Top-level managers, executives, administrators	815,000	689,000	458,000	56,000	48,000	31,000	186,000	138,000	92,000	264,000
Education administrators (e.g., registrar, dean, principal)	136,000	93,000	41,000	2,000	5,000	3,000	28,000	3,000	17,000	78,000
Other mid-level managers	310,000	266,000	193,000	13,000	33,000	10,000	84,000	52,000	28,000	89,000
Management-related occupations	1,309,000	1,133,000	797,000	116,000	83,000	40,000	476,000	81,000	100,000	413,000

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Scientists and engineers, by occupation and degree field: 2008

Occupation	All employed scientists and engineers	Any degree in S&E	Highest degree in S&E							
			All S&E	Computer/ mathematical sciences	Biological/ agricultural/ environmental life sciences	Physical sciences	Social sciences	Engineering	S&E-related fields	Non-S&E fields
Accountants, auditors, and other financial specialists	517,000	453,000	309,000	56,000	29,000	14,000	189,000	20,000	30,000	178,000
Personnel, training, and labor relations specialists	215,000	189,000	141,000	10,000	11,000	2,000	111,000	9,000	17,000	57,000
Other management-related occupations	577,000	491,000	347,000	50,000	44,000	24,000	176,000	52,000	53,000	178,000
Non-S&E precollege teachers	745,000	530,000	298,000	21,000	28,000	7,000	236,000	5,000	126,000	321,000
Prekindergarten and kindergarten teachers	97,000	71,000	52,000	5,000	5,000	S	42,000	S	24,000	21,000
Elementary school teachers	282,000	213,000	108,000	5,000	11,000	4,000	85,000	3,000	37,000	137,000
Secondary school teachers—other subjects	150,000	97,000	57,000	5,000	5,000	1,000	44,000	1,000	21,000	73,000
Special education teachers—primary and secondary	158,000	105,000	44,000	3,000	2,000	S	38,000	S	38,000	76,000
Other precollegiate teachers	58,000	45,000	37,000	2,000	6,000	1,000	27,000	<500	6,000	15,000
Non-S&E postsecondary teachers	157,000	125,000	45,000	5,000	3,000	1,000	32,000	4,000	18,000	94,000
Postsecondary teachers—art, drama, and music	11,000	6,000	3,000	S	S	S	1,000	S	2,000	7,000
Postsecondary teachers—business, commerce, and marketing	25,000	23,000	8,000	2,000	<500	S	5,000	1,000	1,000	16,000
Postsecondary teachers—education	28,000	22,000	6,000	1,000	<500	1,000	3,000	<500	3,000	19,000
Postsecondary teachers—English	16,000	13,000	3,000	S	S	S	3,000	S	S	12,000
Postsecondary teachers—foreign languages	10,000	9,000	5,000	S	S	S	4,000	S	S	5,000
Postsecondary teachers—history	9,000	8,000	3,000	S	S	S	3,000	S	S	6,000
Postsecondary teachers—physical education	7,000	3,000	1,000	S	S	S	S	S	3,000	3,000
Postsecondary teachers—other non-S&E fields	51,000	41,000	17,000	1,000	1,000	<500	12,000	2,000	8,000	26,000
Social services and related occupations	725,000	634,000	367,000	4,000	17,000	2,000	339,000	5,000	69,000	289,000
Clergy and other religious workers	96,000	80,000	26,000	2,000	10,000	<500	10,000	4,000	7,000	63,000
Counselors, educational, vocational, mental health, and substance abuse	303,000	262,000	181,000	2,000	4,000	<500	174,000	S	39,000	82,000
Social workers	326,000	291,000	160,000	S	3,000	S	155,000	S	23,000	144,000
Sales and marketing occupations	1,357,000	1,126,000	922,000	86,000	141,000	36,000	543,000	116,000	172,000	264,000
Insurance, securities, real estate, and business services	461,000	396,000	306,000	33,000	34,000	8,000	209,000	21,000	50,000	106,000
Sales occupations—commodities except retail	263,000	205,000	174,000	11,000	40,000	10,000	74,000	39,000	45,000	44,000
Sales occupations—retail	235,000	187,000	171,000	16,000	28,000	6,000	108,000	14,000	41,000	24,000
Other marketing and sales occupations	398,000	337,000	271,000	25,000	40,000	12,000	152,000	42,000	36,000	90,000
Art, humanities, and related occupations	295,000	226,000	177,000	16,000	25,000	6,000	119,000	10,000	35,000	83,000
Artists, broadcasters, editors, entertainers, public relations specialists, writers	291,000	222,000	177,000	16,000	25,000	6,000	119,000	10,000	34,000	80,000
Historians	4,000	4,000	1,000	S	S	S	1,000	S	S	3,000
Other non-S&E occupations	2,979,000	2,541,000	1,751,000	152,000	305,000	78,000	993,000	223,000	315,000	913,000
Accounting clerks and bookkeepers	128,000	101,000	95,000	23,000	12,000	3,000	50,000	6,000	25,000	8,000
Secretaries, receptionists, typists	149,000	125,000	110,000	10,000	8,000	3,000	86,000	4,000	20,000	19,000
Other administrative (e.g., record clerks, telephone operators)	489,000	400,000	356,000	33,000	49,000	15,000	239,000	20,000	64,000	69,000
Farmers, foresters, and fishermen	96,000	90,000	79,000	3,000	43,000	6,000	20,000	7,000	5,000	12,000
Lawyers, judges	555,000	534,000	29,000	<500	3,000	2,000	22,000	1,000	2,000	524,000

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Scientists and engineers, by occupation and degree field: 2008

Occupation	All employed scientists and engineers	Any degree in S&E	Highest degree in S&E							
			All S&E	Computer/ mathematical sciences	Biological/ agricultural/ environmental life sciences	Physical sciences	Social sciences	Engineering	S&E-related fields	Non-S&E fields
Librarians, archivists, curators	69,000	57,000	19,000	3,000	3,000	<500	11,000	1,000	3,000	47,000
Food preparation and services	120,000	102,000	94,000	9,000	15,000	2,000	58,000	9,000	16,000	10,000
Protective services occupations	182,000	161,000	138,000	8,000	21,000	4,000	98,000	8,000	12,000	32,000
Other service occupations, except health	230,000	194,000	171,000	6,000	31,000	5,000	118,000	11,000	26,000	33,000
Other teachers and instructors in noneducational institutions	83,000	66,000	50,000	5,000	12,000	3,000	26,000	4,000	15,000	18,000
Construction and extraction occupations	181,000	135,000	122,000	8,000	22,000	6,000	40,000	47,000	38,000	20,000
Installation, maintenance, and repair occupations	119,000	94,000	90,000	7,000	14,000	3,000	27,000	38,000	18,000	11,000
Precision/production occupations	148,000	111,000	96,000	13,000	28,000	7,000	22,000	27,000	27,000	24,000
Transportation and material moving occupations	166,000	141,000	121,000	11,000	14,000	11,000	56,000	30,000	20,000	25,000
Other occupations	265,000	232,000	183,000	13,000	29,000	9,000	122,000	11,000	23,000	59,000

S = suppressed due to reasons of confidentiality and/or reliability

NOTE: Detail may not add to total because of rounding.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Scientists and Engineers Statistical Data System (SESTAT) (2008), <http://sestat.nsf.gov>.*Science and Engineering Indicators 2012*